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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Christopher A. Spence

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04/14/2004

Jonathan A Platt
Renner Otto Boisselle & Sklar LLP
19th floor
1621 Euclid Avenue
Cleveland, OH 44115

EXAMINER

WERNER, BRIAN P

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/515,348

Applicant(s)

SPENCE, CHRISTOPHER A.

Examiner

Brian P. Werner

Art Unit

2621

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 30 March 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: Refer to attachment.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-20.

Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

ATTACHMENT TO ADVISORY ACTION (PAPER # 11)

Response to Arguments

Each of the remarks and/or arguments filed on March 30, 2004 (referred to as the "response" below) have been considered:

102 Rejections:

Summary of Applicant's Remarks: Regarding the Pierrat reference, the applicant's argument is well summarized by the following statements (quoted from response page 2):

"Pierrat does not disclose comparing a simulated wafer structure to a desired wafer structure", and

"Pierrat discloses ... comparing a simulated wafer structure ... relative to a simulated wafer structure using mask pattern data" but "Pierrat's mask pattern data 210 is not a desired wafer structure as recited in claim 1" at response page 2 of 5.

In summary, it appears to be the applicant's contention that Pierrat's "simulated wafer structure using mask pattern data" does not meet the "desired wafer structure" requirements of claim 1.

Examiner's Response:

In the previous Office Action, the examiner applied the Pierrat reference to the "desired wafer structure" limitation as follows:

“evaluating the portion of the mask by comparing the simulated wafer structure with a desired wafer structure (figure 3, numeral 270; the simulated wafer structure at numeral 260 is compared with design data at numeral 210, and design data represents the desired wafer structure; the claim is open ended, and does not preclude intermediate processing such as the processing of numerals 255 and 265).”

Even in light of the applicant's arguments, the examiner still maintains the propriety of this rejection as follows.

Independent claim 1 requires comparing the simulated wafer structure with “a desired wafer structure”. This is the full extent of the claimed requirement of a “desired wafer structure”. It appears that the applicant's entire argument is based on the definition of “desired”. Thus, the plain meaning as well as the definition afforded by the applicant's specification shall be discussed:

The plain meaning of “desired” is to wish or long for, to want¹. Pierrat's design data (i.e., Pierrat figure 1, numeral 210) is what is used to actually create the mask, which in turn creates the wafer, and thus Pierrat's design data represents the pattern that is wanted, or wished for, or desired. Just as an architectural plan or blueprint, the “design” data represents the desired result. This is so axiomatic that it is seldom necessary to state in a reference. However, the Garza reference clearly acknowledges this in the background section, stating:

"Ideally, the pr [photoresist] pattern produced by the photolithography process and the substrate pattern produced by the subsequent etch process would precisely duplication the pattern on the photomask" (column 1, line 55);

"... approximates the desired pattern as closely as possible" (column 2, line 17).

Even according to the applicant's own disclosure, the "desired pattern" is created in the exact same manner as in Pierrat. That is, the applicant creates a "second simulated wafer structure using the ideal mask patter design that was used in producing the actual mask pattern" at specification page 4, line 30. This is exactly how Pierrat creates the comparison data, as depicted at figure 1, at numerals 210, 255, 265 and 270. Thus, even when read in light of the applicant's disclosure, and even when **improperly** reading limitations from the specification into the claim, Pierrat still anticipates the "desired structure" limitation.

In summary, the examiner contends that the claims have been properly construed, and that Pierrat fully anticipates each and every element of claim 1 (as well as the other rejected claims).

Summary of the Applicant's Remarks: "The desired wafer structure of the present invention is an optimum wafer structure but is not necessarily an exact duplicate of the photomask and/or photomask design data."

¹ (The American Heritage® Dictionary of the English Language, Third Edition copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from INSO Corporation; further reproduction and distribution restricted in accordance with the Copyright Law of the United States. All rights reserved.)

Art Unit: 2621

Examiner's Response: Unclaimed subject matter, none of which is recited, implied, suggested, inherent to etc. in claim 1. The "desired wafer structure" of claim 1 is not modified by any additional limitations; and the examiner shall not improperly read any limitations from the specification into the claims.

103 Rejections:

Summary of Applicant's Remarks: "Garza teaches away from comparing a simulated image with another simulated image" and "there is not motivation to combine the teachings of Garza with the teaching of Pierrat" (response page 4 of 5).

Examiner's Response: Disagreed. The motivation provided in the previous Office Action was clear, and directly quoted from the Pierrat reference. The examiner's motivational statement read as follows:

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Garza system to simulate wafer structure from a mask image as taught by Pierrat, instead of actually creating and imaging the wafer structure, to obviate the costs associated with transferring a defective mask pattern to an actual wafer ("costly to repair" and "discarded" at Pierrat, column 2, lines 38-42), by anticipating the mask defects "before resist processing begins" (Pierrat column 2, line 44).


The applicant has not addressed the motivation at all. Rather, the arguments consist of unsupported assertions that the combination lacks motivation and that Garza teaches

Art Unit: 2621

away. How does Garza teach away? What in the motivation explicitly provided by the examiner is "lacking"?

In summary, the examiner contends that the claims have been properly construed, and that the Garza and Pierrat combination is well founded and proper under the law.

Brian Werner
Primary Examiner
Art Unit 2621
Office: 703-306-3037



BRIAN WERNER
PRIMARY EXAMINER